REMARKS

Amendments

Claims 1-20 and 22-29 are amended to use language in accordance with conventional US practice. Claim 21 is cancelled. In addition, claim 1 is amended to recite that polymerised liquid crystal material is a nematic or smectic liquid crystal material. New claims 30-38 are directed to further aspects of applicants' invention. Support for these claims is provided throughout the disclosure. See, e.g., page 8, line 32-page 9, line 6, page 10, lines 32-35, page 11, line 20-page 13, line 22, page 15, lines 16-20, page 15, line 27-page 16, line 2, page 21, lines 33-36, and page 22, lines 1-3.

Rejection under 35 USC 102(b)

Claims 1-29 are rejected as allegedly being anticipated in view of either Ichimura et al. (US 6,001,277) or Arakawa et al. (US 5,528,400). This rejection is respectfully traversed.

The rejection merely recites some of the features of applicants' claims and then makes the unsupported conclusion that these features are disclosed in the cited references. The rejection provides no indication where either of the references describes any of the features of applicants' claims.

To establish anticipation, the rejection must indicate where the asserted anticipatory reference discloses each and every feature of the rejected claim. See, e.g., *Ex parte Levy*, 17 USPQ2d 1461, 1462 (POBA 1990) [""Moreover, it is incumbent upon the examiner to identify wherein each and every facet of the claimed invention is disclosed in the applied reference."].

Thus, the instant anticipation rejection is improper since it fails to indicate where each of the features of independent claims 1, 12, and 15, let alone dependent claims 2-11, 13, 14, and 16-29 are disclosed. The rejection should therefore be withdrawn on this basis alone.

Ichimura et al. (US '277) disclose a liquid crystal alignment film which comprises a resin containing a photoisomerizable and dichroic structural unit. See formulas (1)-(28) at columns 14-25. The film is said to be able to align liquid-crystal molecules when irradiated with linearly polarized light. See, e.g., column 4, lines 19-24. Irradiation can be performed multiple times, and can be combined with rubbing. See column 33, lines .27-43. At columns 9-11, Ichimura et al. describe how the ability to cause liquid-crystal alignment can be fixed

and held in the alignment film, for example, by causing a heat-curing reaction when the resin contains a heat-curable structural unit.

However, Ichimura et al. do not disclose or suggest a film that has at least two regions with different retardation of liquid crystal material, and/or at least two regions with different orientation. In particular, Ichimura et al. do not disclose or suggest a film of polymerised nematic or smectic liquid crystal material having at least two regions with different retardation of liquid crystal material, and/or at least two regions with different orientation. In fact, the disclosure of Ichimura et al. does not mention "retardation" or "orientation." Compare, e.g., applicants' claims 1.

Arakawa (US 5,528,400) discloses a LC display comprising a liquid crystal cell having a pair of substrates, a transparent electrode, and twist nematic liquid crystal sealed between the substrates. Each side of the cell is provided with a polarizing plate. These plates comprise a polarizer and a pair of protective films provided on both sides of the polarizer. In addition, an optical compensatory sheet is provided between the cell and the polarizing plate on one or both sides of the cell. See, e.g., column 2, lines 46-59.

The optical compensatory sheet comprises at least two optically anisotropic films having optically negative uniaxial property. One film has an optic axis in the direction of the normal of the film and other film having an optic axis in a direction inclined at 5° to 50° from the normal. See, e.g., column 2, lines 6-65. As shown in Figure 5, the optical compensatory sheet can have a transparent support, an orientation film, and an optically anisotropic film having an optically negative uniaxial property and an optic axis in a direction inclined at 5° to 50° from the normal. See column 8, lines 29-36.

Arakawa discloses that this optically anisotropic film can be a layer of dischotic compounds or a layer comprising an optical isomerizable compound, i.e., a compound that can be converted into a stereoisomer or structural isomer by means of a light. See column 3, lines 16-19 and 30-33, column 8, lines 46-51, and column 16, lines 36-39. Examples of optical isomerizable compound are described at columns 16-20.

In Fig. 7, Arakawa discloses a display having two optical compensatory sheets RF1 and RF2 having different rubbing directions, R1 and R2, respectively. See column 22, lines 18-38.

However, Arakawa does not disclose or suggest a film having at least two regions with different retardation of liquid crystal material, and/or at least two regions with different

orientation. In particular, Arakawa does not disclose or suggest a film of polymerised nematic or smectic liquid crystal material having at least two regions with different retardation of liquid crystal material, and/or at least two regions with different orientation.

In view of the above remarks, it is respectfully submitted that each of Ichimura et al. and Arakawa fail to anticipate applicants' claimed invention in accordance with 35 USC 102. Withdrawal of the rejection is respectfully requested.

Rejection under 35 USC 102(e)

Claims 1-29 are rejected as allegedly being anticipated in view of either Vaughn-Spickers et al. (US 7,122,227) or Takeda et al. (US 2006/0127605). This rejection is respectfully traversed.

Here again, the rejection merely recites some of the features of applicants' claims and then makes the unsupported conclusion that these features are disclosed in the cited references. The rejection provides no indication where either of the references describes any of the features of applicants' claims.

As noted above, to establish anticipation, the rejection must indicate where the asserted anticipatory reference discloses each and every feature of the rejected claim. See, e.g., *Ex parte Levy*, 17 USPQ2d 1461, 1462 (POBA 1990) [""Moreover, it is incumbent upon the examiner to identify wherein each and every facet of the claimed invention is disclosed in the applied reference."].

Thus, the instant anticipation rejection is improper since it fails to indicate where each of the features of independent claims 1, 12, and 15, let alone dependent claims 2-11, 13, 14, and 16-29 are disclosed. The rejection should therefore be withdrawn on this basis alone.

Vaughn-Spickers et al. (US 7,122,227) discloses a genus of chiral photoisomerisable compounds, as well as an anisotropic film comprising the chiral photoisomerisable compounds. Vaughn-Spickers et al. further disclose a reflective polymer film with patterned optical properties comprising the chiral photoisomerisable compounds, such as a cholesteric polymer film having different regions with different reflection wavelength. See column 3, line 55-column 4, line 47.

Beginning at column 34, line 48, Vaughn-Spickers et al. describe the preparation of reflective films made from chiral materials, i.e., cholesteric reflective films, that have a horizontal pattern with regions of different reflection wavelength. The film can be prepared

by providing a layer of a cholesteric polymerizable mixture, which comprises the novel chiral photoisomerizable compound disclosed by Vaughn-Spickers et al., onto a substrate and then aligning the material into planar orientation. The resultant layer has a selective reflection of a wavelength which depends on the helical pitch p of the cholesteric material. By exposure to photoradiation of a suitable wavelength, the photoisomerizable group(s) are isomerized. By subjecting only parts of the layer to photoradiation, one can change the helical pitch and reflection wavelength only in those parts exposed to photoradiation, whereas unexposed parts remain unchanged. The pitch of these regions can then be fixed by (photo)polymerization. If the unexposed parts are then subsequently subjected to photoisomerization and (photo)polymerization, one can produce a patterned cholesteric film having regions with different reflection wavelengths.

However, Vaughn-Spickers et al. do not disclose or suggest a film of polymerised nematic or smectic liquid crystal material having at least two regions with different retardation of liquid crystal material, and/or at least two regions with different orientation.

Takeda et al. (US 2006/0127605) disclose a broad band cholesteric liquid crystal film that comprises a cholesteric liquid crystal film obtained from a liquid crystal mixture containing a polymerizable mesogen compound (a), a polymerizable chiral agent (b) and a photoisomerizable material (c). The material is polymerized by subjecting it to ultraviolet radiation. The film has a reflection bandwidth of 200 nm or more. See, e.g., paragraph [0024]. Suitable photoisomerizable compounds for use in the film are described in paragraph [0071].

Takeda et al. do not disclose or suggest a film having at least two regions with different retardation of liquid crystal material, and/or at least two regions with different orientation. In particular, Takeda et al. do not disclose or suggest a film of polymerised nematic or smectic liquid crystal material having at least two regions with different retardation of liquid crystal material, and/or at least two regions with different orientation.

In view of the above remarks, it is respectfully submitted that each of Vaughn-Spickers et al. and Takeda et al. fail to anticipate applicants' claimed invention in accordance with 35 USC 102. Withdrawal of the rejection is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

/Brion P. Heaney/

Brion P. Heaney, Reg. No. 32,542
Attorney for Applicants

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
Arlington Courthouse Plaza 1
2200 Clarendon Boulevard, Suite 1400
Arlington, VA 22201
Telephone: 703-243-6333
Facsimile: 703-243-6410
Attorney Docket No.:MERCK-3079

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